

Section I (Amendments to the Claims)

Please cancel claims 1, 2, 5-9 and 23-29, without prejudice.

Please amend claim 18, as indicated.

Please add new claims 30-36.

Complete Listing of the Claims

Upon entry of the present amendment, the claims will stand as follows. The following listing of the claims will replace all prior versions and listings of the claims in the present application:

1-9. (Canceled)

10. (Withdrawn) A recombinant vector inserted with an FAD-encoding base sequence in front of the 5' region of TRD-encoding DNA, a PTD base sequence, a base sequence for tagging, and at least four histidine-encoding base sequences for separation and purification.

11. (Withdrawn) A transformed bacteria with the recombinant vector of claim 10.

12. (Withdrawn) A method for preparing non-activated TRP, comprising the steps of:

(a) culturing the transformed bacteria of claim 11 to express a [PTD-FAD-TRD] polypeptide; and

(b) centrifuging the culture broth, and then removing the two-dimensional or three-dimensional structure of the polypeptide or converting the two-dimensional or three-dimensional structure to one-dimensional linear structure by addition of urea solution into the supernatant and cell pellet, and then purifying the [PTD-FAD-TRD] polypeptide.

13. (Withdrawn) The method for preparing the non-activated TRP according to claim 12, wherein the TRD to be cleaved by proprotein coverase is selected from the group consisting of BMPs, TGF- β , - β -NGF (β -nerve growth factor), β -amyloid, ADAMs (a disintegrin and metalloproteinase-like), TNF- α , MMPs (matrix metalloproteinases), and insulin-like growth factor (IGF-1).

14. (Withdrawn) The method for preparing non-activated TRP according to claim 12, wherein the TRD is an amino acid sequence selected from the group consisting of SEQ ID NOs: 1 to 13.

15. (Withdrawn) The method for preparing non-activated TRP according to claim 12, wherein the FAD is an amino acid sequence selected from the group consisting of SEQ ID NOs: 14 to 26.

16. (Withdrawn) The method for preparing non-activated TRP according to claim 12, wherein the PTD is selected from the group consisting of TAT, drosophila melanogaster-derived Antp peptide, VP22 peptide and mph-1-btm.

17. (Withdrawn) The method for preparing non-activated TRP according to claim 12, wherein the purification step comprises the sub-steps of binding the polypeptide to nickel-titanium beads, washing the beads with the same solution, and then eluting the beads with imidazole and a high-salt buffer solution.

18. (Currently amended) A composition for stimulating the growth, formation or regeneration of tissue, containing the non-activated tissue-regeneration polypeptide (TRP) as an active ingredient ~~as in claim 1~~ wherein the non-activated TRP contains:

(a) a protein transduction domain (PTD);

(b) a furin activation domain (FAD) which has at least one proprotein convertase cleavage site and is cleaved by the proprotein convertase in cells; and

(c) a non-activated tissue regeneration domain (TRD) which is activated by the proprotein convertase cleavage of the FAD,

wherein the non-activated TRP has a linear structure and, when activated, stimulates the growth or formation of tissues or induces the regeneration of tissues.

19. (Original) The composition according to claim 18, wherein the tissue is bone or cartilage.

20. (Original) The composition according to claim 19, which further contains the growth factor selected from the group consisting of TGF- β , IGF, PDGF, and FGF.

21.-29. (Cancelled)

30. (New) The composition according to claim 18, wherein the proprotein convertase is furin.

31. (New) The composition according to claim 18, wherein the TRD to be cleaved by proprotein convertase is selected from the group consisting of BMPs, TGF- β , β -NGF (β -nerve growth factor), β -amyloid, ADAMs (a disintegrin and metalloproteinase-like), TNF- α , MMPs (matrix metalloproteinases), and insulin-like growth factor (IGF-1).

32. (New) The composition according to claim 18, wherein the TRD is an amino acid sequence selected from the group consisting of SEQ ID NOs: 1 to 13.
33. (New) The composition according to claim 18, wherein the FAD is an amino acid sequence selected from the group consisting of SEQ ID NOs: 14 to 26.
34. (New) The composition according to claim 18, wherein the PTD is selected from the group consisting of TAT, drosophila melanogaster-derived Antp peptide, VP22 peptide and mph-1-btm.
35. (New) The composition according to claim 18, which is in the form of fusion polypeptide of PTD, FAD and TRD.
36. (New) A method of stimulating the growth, formation or regeneration of tissue, comprising administration to a tissue growth, formation or regeneration locus of a non-activated tissue-regeneration polypeptide (TRP), wherein the non-activated TRP contains:
- (a) a protein transduction domain (PTD);
 - (b) a furin activation domain (FAD) which has at least one proprotein convertase cleavage site and is cleaved by the proprotein convertase in cells; and
 - (c) a non-activated tissue regeneration domain (TRD) which is activated by the proprotein convertase cleavage of the FAD,
- and wherein the non-activated TRP has a linear structure and, when activated, stimulates the growth or formation of tissues or induces the regeneration of tissues.

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